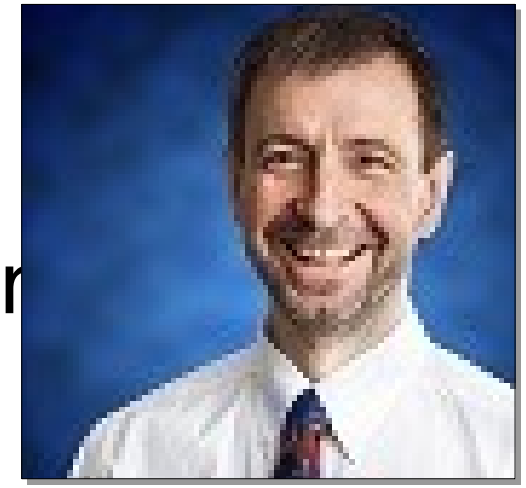
MVA jumpstart

Advanced Tools and Scripting with PowerShell 3.0

Jeffrey Snover | Distinguished Engineer & Lead Architect
Jason Helmick | Senior Technologist, Concentrated Technology

Microsoft

Meet Jeffrey Snover | @jsnover



- Distinguished Engineer & Lead Architect for Windows Server & System Center Division
  - Inventor of Windows PowerShell
  - Responsible for setting long term technical vision for these products and running the technology planning for the releases
- Over 30 years of industry experience
  - Microsoft, Tivoli, NetView, DEC
  - Held 8 patents prior to joining Microsoft, and has registered 30 since.
  - Frequent speaker at industry and research conferences on a variety of management and language topics

Meet Jason Helmick | @theJasonHelmick

- Senior Technologist, Concentrated Technolog
  - Board member and CFO – PowerShell.Org
  - Author “Learn Windows IIS in a Month of Lunches
  - Contributing author “PowerShell Deep Dives”
- 25 year IT veteran
  - Speaker at a variety of industry conferences
  - Teaches PowerShell for the IT pro to maximize management and automation
  - Frequent contributor to TechNet Magazine and other industry publications

Course Topics

Scripting and Toolmaking	
01 | Get started scripting	06 | Writing help
02 | PowerShell's scripting language	07 | Error handling
03 | Simple scripts and functions	08 | Tools that make changes
04 | Advanced functions	09 | Script and Manifest modules
05 | More on parameters	

MVA jumpstart

Setting Expectations

- Target Audience
  - Tailored for the IT pro that needs to improve management and automation
  - Fast paced for the real world
- Suggested Prerequisites/Supporting Material
  - Experience working as a Windows IT pro/Admin/Help Desk
  - Get answers in the forums at PowerShell.Org
  - Coming Soon – Microsoft Marketplace course 55038 Windows PowerShell Scripting and Toolmaking
  - Check out “Learn PowerShell Toolmaking in a Month of Lunches” by Don Jones and Jeffery Hicks

Join the MVA Community!

- Microsoft Virtual Academy
  - Free online learning tailored for IT Pros and Developers
  - Over 1M registered users
  - Up-to-date, relevant training on variety of Microsoft products
- “Earn while you learn!”
  - Get 50 MVA Points for this event!
  - Visit http://aka.ms/MVA-Voucher
  - Enter this code: **AdvPowerShell** (expires 9/2/2013)

Questions or comments?

Administrator: Windows PowerShell

```
PS C:\> # Have a question or comment?
PS C:\> # Go ahead and ask before we proceed...
PS C:\> # Also, you will be able to view the recording later...
PS C:\> # And you always have -- GET-HELP !
PS C:\>
```

01 | Get started scripting

Jeffrey Snover | Distinguished Engineer & Lead Architect
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MVA Microsoft Virtual Academy

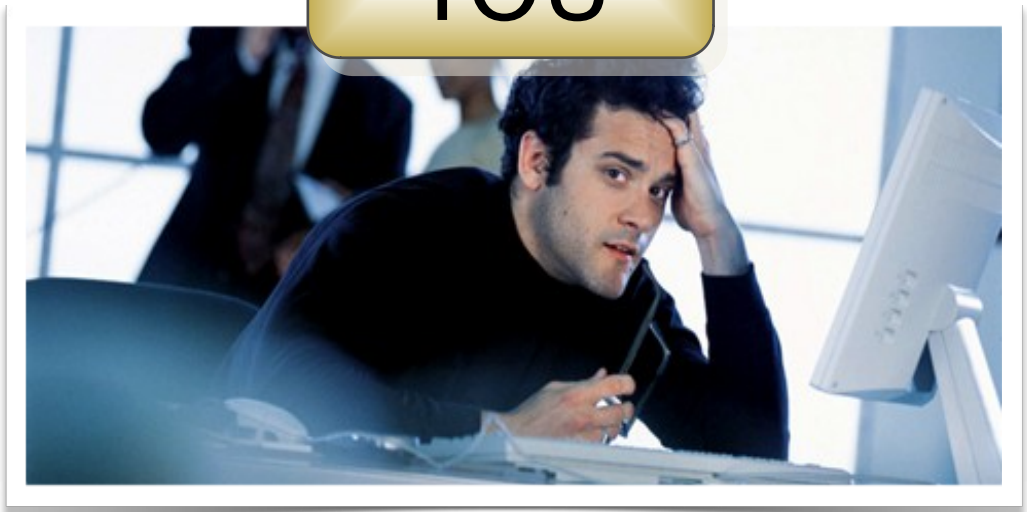
Microsoft

Module Overview

- The purpose for PowerShell
- Installing PowerShell – Windows Management Framework
- Launching PowerShell for the administrator
- PowerShell security goals
- Execution Policy
- Running Scripts
- PowerShell ISE overview

The Purpose to PowerShell

YOU



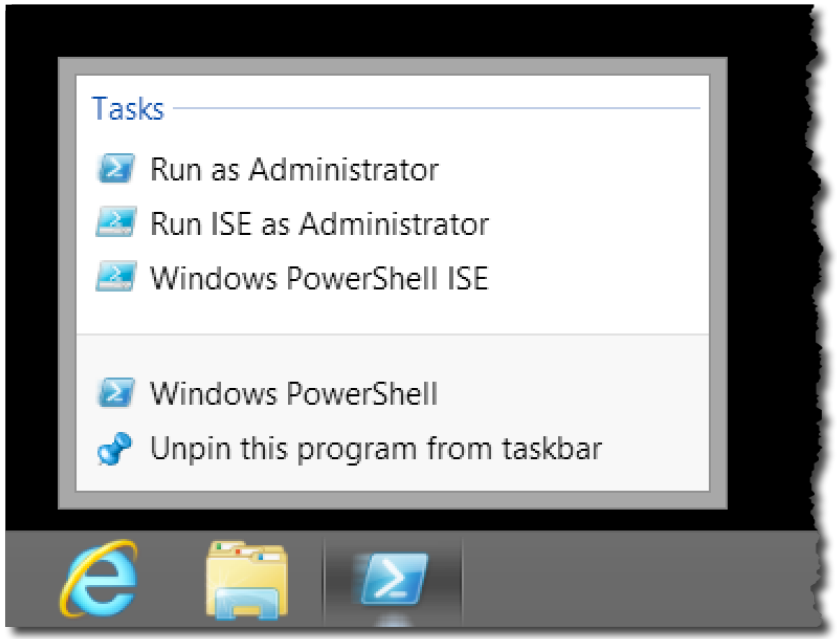
THEM

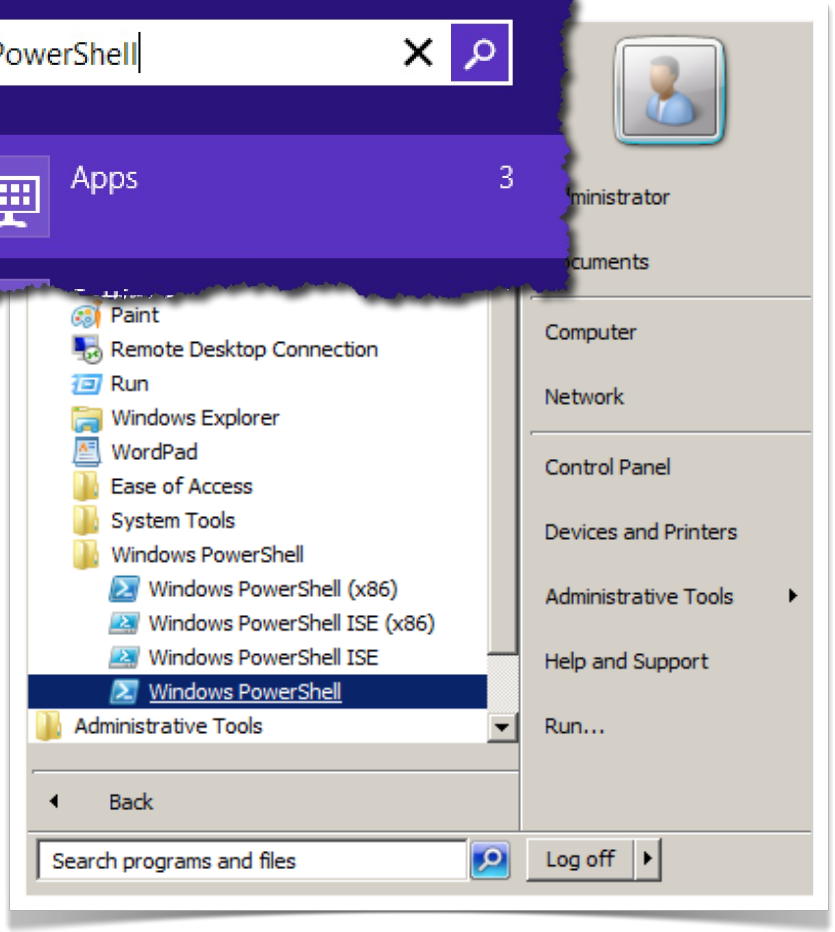
- Improved management and automation
- Manage real-time
- Manage large scale

Installing PowerShell – Windows Management Framework

- PowerShell V3 – Windows 8 and Server 2012
- PowerShell V3 – Windows 7 SP1 and Server 2008 SP2 or Server 2008 R2 SP1
- Download the Windows Management Framework 3.0 at
- http://www.microsoft.com/en-us/download/details.aspx?id=34595
- Read the instructions – you need the Full .NET 4.0 framework

Launching PowerShell for the Administrator





PowerShell security goals

- Secured by default
- Prevents mistakes by unintentional admins and users
- No Script Execution
- .Ps1 associated with notepad
- Must type path to execute a script

Execution Policy

- By default, PowerShell does not run scripts.
- Get/Set-ExecutionPolicy
- Restricted
- Unrestricted
- AllSigned
- RemoteSigned
- Bypass
- Undefined
- Can be set with Group Policy

Running scripts

Administrator: Windows PowerShell

```
PS C:\> C:\Scripts\test.ps1
Hello world!
PS C:\> cd scripts
PS C:\scripts> .\test.ps1
Hello world!
PS C:\scripts> . .\test.ps1
Hello world!
PS C:\scripts> Get-Fun
MVA and Scripting with PowerShell Rocks!
PS C:\scripts>
```

The new ISE

Administrator: Windows PowerShell ISE

File Edit View Tools Debug Add-ons Help

```
PS C:\> Get-WmiObject -Class win32_LogicalDisk -Filter "DeviceID='C:'" -ComputerName localhost
```

Administrator: Windows PowerShell ISE

File Edit View Tools Debug Add-ons Help

Script.ps1

```
1
2   Get-WmiObject -Class win32_LogicalDisk -Filter "DeviceID='C:'" -ComputerName localhost |
3       Select-Object -Property DeviceID,
4       @{n='SizeGB';e={$_.Size / 1GB -as [int]}},
5       @{n='FreeGB';e={$_.Freespace / 1GB -as [int]}} |
6
```

Questions or comments?

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